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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,010	05/11/2001	Ehud Levy	40654/258424	7803

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EXAMINER

CINTINS, IVARS C

ART UNIT	PAPER NUMBER
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1724

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DATE MAILED: 09/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/854,010

Applicant(s)  
Levy

Examiner  
Ivars Cintins

Art Unit  
1724



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

Art Unit: 1724

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Amarasinghe et al. (U.S. Patent No. 6,355,166). See col. 25, lines 27-28. The intended use of a product (i.e. as a filtration media for drinking water) is not a product limitation, and hence cannot be relied upon to distinguish product claim 1.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

Art Unit: 1724

skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amarasinghe et al. The reference discloses the claimed invention with the exception of the amount of nanocrystals present in the composite media (claim 3), and their average particle size (claim 6). However, the exact amount of nanocrystals present in the composite media of Amarasinghe et al., as well as their exact average particle size, are not seen to materially affect the overall properties of the reference material, or to produce any new and unexpected result; and are therefore deemed to be obvious matters of choice, insufficient to patentably distinguish the claims.

Claims 1-4 and 6-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lisenko (U.S. Patent No. 5,639,550) in view of Amarasinghe et al. Lisenko discloses a composite fluid treatment material comprising titanium oxide (col. 3, line 25), activated carbon (col. 3, line 58), and a polymeric binder such as polyethylene (col. 4, line 12). Accordingly, this primary reference discloses the claimed invention with the exception of the use of metal oxide nanocrystals. Amarasinghe et al. discloses a similar metal oxide containing composite material, and further teaches the use of nanocrystals. It would have been

Art Unit: 1724

obvious to one of ordinary skill in the art at the time the invention was made to employ nanocrystals of titanium oxide to form the composite material of Lisenko, as suggested by Amarasinghe et al., in order to promote an even distribution of the titanium oxide throughout the composite material of this primary reference. The exact amount of nanocrystals present (claims 3 and 9-15), their exact average size (claim 6), the exact average size of the activated carbon particles (claims 11-13), and the exact ratio of components in the product (claims 13-15) are deemed to be obvious matters of choice, dependent upon the desired characteristics of the final product.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lisenko and Amarasinghe et al. as applied to claims 1-4 and 6-15 above, and further in view of Sugimoto (U.S. Patent No. 5,989,420). The modified primary reference discloses the claimed invention with the exception of the presence of zirconia in the composite material. Sugimoto teaches (see col. 12, lines 5 and 8-9) that zirconia can be used in combination with titanium oxide in the formation of composite filtration materials. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the zirconia of Sugimoto into the composite fluid treatment media of Lisenko as modified by Amarasinghe et al., in view of the

Art Unit: 1724


disclosure by Lisenko (see col. 3, lines 22-23) that inorganic metal oxides, in general, can be used in the formation of the reference composite material; and further in view of the teaching by Sugimoto that it is known to form similar composite materials from a combination of zirconia and titanium oxide.

VanderBilt et al. (U.S. Patent No. 4,753,728) discloses a composite water filter comprising activated carbon and a high density polyethylene binder (col. 3, lines 39-40).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (703) 308-3840. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

The fax phone numbers for this art unit are: (703) 872-9311 for "Official" faxes after Final Rejection; (703) 872-9310 for all other "Official" faxes; and (703) 872-9492 for "Draft" and other "Unofficial" faxes.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

  
**Ivars C. Cintins**  
**Primary Examiner**  
**Art Unit 1724**

I. Cintins  
September 13, 2002